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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicants:	Thomas J. CAMPANA, Jr., et al
Serial No.:	07/702,939
Filed:	May 20, 1991
For:	ELECTRONIC MAIL SYSTEM WITH RF COMMUNICATIONS TO MOBILE PROCESSORS
Group:	2608
Examiner:	G. Oehling

SECOND SUPPLEMENTAL AMENDMENT

Honorable Commissioner of
Patents and Trademarks
Washington, D. C. 20231

May 13, 1994

Sir:

This Amendment is supplemental to the Supplemental Amendment of April 29, 1994.

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IN THE SPECIFICATION:

Page 1, after line 3 and before line 4 in the title, instead of inserting "**And Method of Operation Thereby**" please insert --**And Method of Operation Thereof**--.

P 30042 06/01/94 07702939 08-1650 030 203 44.00CH

060 AA 05/19/94 07702939 1 107 148.00 CK

IN THE CLAIMS:

Please amend the claims as follows:

~~86. (Amended)~~ A system for transmitting ~~originated~~ information from one of a plurality of originating processors in an electronic mail system to at least one of a plurality of destination processors in the electronic mail system comprising:

at least one gateway switch in the electronic mail system, one of the at least one gateway switch receiving the originated information and storing the originated information prior to transmission of the originated information to the at least one of the plurality of destination processors;

a RF information transmission network for transmitting the originated information to at least one RF receiver which transfers the originated information to the at least one of the plurality of destination processors;

at least one interface switch, one of the at least one interface switch connecting at least one of the at least one gateway switch to the RF information transmission network and transmitting the originated information received from the gateway switch to the RF information transmission network; and wherein

the originated information is transmitted to the one interface switch by the one gateway switch in response to an ~~address of the one~~ interface switch added to the originated

~~information at the one of the plurality~~ of originating processors or by the electronic mail system and the originated information is transmitted from the one interface switch to the RF information transmission network with an address of the at least one of the plurality of destination processors to receive the originated information added at the originating processor, or by either [by] the electronic mail system or the one interface switch; and

the electronic mail system transmits other originated information from one of the plurality of originating processors in the electronic mail system to at least one of the plurality of destination processors in the electronic mail system through a telephone network.

~~92. (Amended) A system in accordance with claim 87~~ wherein:

the [electronic mail system also transmits] telephone network transmitting the other originated information between the one of the plurality of originating processors and the at least one of the plurality of destination processors [through] is one of either a public or private switch telephone network [without transmission by the RF information transmission network] with the at least one destination processor being addressed during transmission of the information to the at least one destination processor when ~~using the public or private switch telephone network with a~~

C2 conc sub E3

~~different address than the address used during transmission to~~ the at least one of the plurality of ~~destination~~ processors by ~~the RF information transmission~~ network.

~~103. (Amended) A method for transmitting originated~~ information from one of a plurality of originating processors in an electronic mail system to at least one of a plurality of destination processors in the electronic mail system comprising:

transmitting the originated information originating from the one of the plurality of originating processors to a gateway switch within the electronic mail system;

transmitting the originated information from the gateway switch to an interface switch;

C3 cont sub E4

transmitting the originated information received from the gateway switch from the interface switch to an RF information transmission network; [and]

transmitting the originated information with the RF information transmission network to at least one RF receiver which transfers the originated information to the at least one of the plurality of destination processors; and [wherein]

transmitting other originated information with the electronic mail system from one of the plurality of originating processors in the electronic mail system to at least one of the plurality of destination processors in the

electronic mail system through a telephone network; and wherein

the originated information is transmitted to the interface switch by the gateway switch in response to an address of the interface switch which has been added to the originated information at the one of the plurality of originating processors or by the electronic mail system and the originated information is transmitted from the interface switch to the RF information transmission network with an address of the at least one of the plurality of destination processors to receive the originated information which has been added at the originating processor or by either [by] the electronic mail system or the interface switch.

C3 concl sub E4

109. (Amended) A method in accordance with claim 104 wherein:

the [electronic mail system also transmits] transmission of the other originated information between the one of the plurality of originating processors and the at least one of the plurality of destination processors [through] by the telephone network is through either a public or private switch telephone network [without transmission by the RF information transmission network] with the at least one of the plurality of destination processors being addressed during transmission of the originated information to the at least one of the plurality of destination processors when using the

C4 cont'd sub E6

C4 concl sub E6

~~public or private switch telephone network with a different~~ address than the address used during ~~transmission~~ to the at least one of the ~~plurality of~~ destination processors by the ~~RF information transmission network.~~

~~120. (Amended)~~ A system for transmitting originated information from one of a plurality of originating processors in an electronic mail system to at least one of a plurality of destination processors in the electronic mail system comprising:

a RF information transmission network for transmitting the originated information to at least one RF receiver which transfers the originated information to the at least one of the plurality of destination processors;

C5 cont'd

at least one interface switch, one of the at least one interface switch connecting the electronic mail system to the RF information transmission network and transmitting the originated information <u>received from the electronic mail system</u> to the RF information transmission network; and wherein

sub E7

the originated information is transmitted to the one interface switch by the electronic mail system in response to an address of the one interface switch added to the originated information at the one of the plurality of originating processors or by the electronic mail system and the originated information is transmitted from the one interface switch to the RF ~~information~~ transmission network with ~~an address of the~~

~~at least one of the plurality of destination processors to~~ receive the originated information added at the originating processor, or by either [by] the electronic mail system or the one interface switch; and

the electronic mail system transmits other originated information from one of the plurality of originating processors in the electronic mail system to at least one of the plurality of destination processors in the ~~electronic mail system through a telephone network.~~

126. ~~(Amended) A system in accordance with claim 121~~ wherein:

the [electronic mail system also transmits] telephone network transmitting the other originated information between the one of the plurality of originating processors and the at least one of the plurality of destination processors [through] is one of either a public or private switch telephone network [without transmission by the RF information transmission network] with the at least one of the plurality of destination processors being addressed during transmission of the information to the at least one of the plurality of destination processors when using the public or private switch telephone network with a different address than the address used during transmission to the at least one of the plurality of destination processors by the RF information ~~transmission network.~~

~~137. (Amended) A method for transmitting originated~~ information from one of a plurality of originating processors in an electronic mail system to at least one of a plurality of destination processors in the electronic mail system comprising:

transmitting the originated information originating from the one of the plurality of originating processors <u>from the electronic mail system</u> to an interface switch;

transmitting the originated information <u>received from the electronic mail system</u> from the interface switch to an RF information transmission network; [and]

transmitting the originated information with the RF information transmission network to at least one RF receiver which transfers the originated information to the at least one of the plurality of destination processors; and [wherein]

<u>transmitting other originated information with the electronic mail system from one of the plurality of originating processors in the electronic mail system to at least one of the plurality of destination processors in the electronic mail system through a telephone network; and wherein</u>

the originated information is transmitted to the one interface switch by the electronic mail system in response to an address of the interface switch added to the originated ~~information at the one of the plurality of originating~~

C7 (cont'd) Sub E9

~~processors~~ or by the electronic mail system and the originated information is transmitted from the interface switch to the RF information transmission network with an address of the at least one of the plurality of destination processors to receive the originated information added at the originating processor or [either] by either the electronic mail system or ~~the interface switch.~~

C7 concl sub E9

~~143. (Amended) A method in accordance with claim 138~~ wherein:

the [electronic mail system also transmits] transmission of the other originated information between the one of the plurality of originating processors and the at least one of the plurality of destination processors [through] by the telephone network is through either a public or private switch telephone network [without transmission by the RF information transmission network] with the at least one of the plurality of destination processors being addressed during transmission of the information to the at least one of the plurality of destination processors when using the public or private switch telephone network with a different address than the address used during transmission to the at least one of the plurality of destination processors by the RF information ~~transmission network.~~

C8 sub E10

Please insert new claims 172-175 as follows:

~~172.~~ A system for transmitting originated information from one of a plurality of originating processors in an electronic mail system to at least one of a plurality of destination processors in the electronic mail system comprising:

at least one gateway switch in the electronic mail system, one of the at least one gateway switch receiving the originated information and storing the originated information prior to transmission of the originated information to the at least one of the plurality of destination processors;

a RF information transmission network for transmitting the originated information to at least one RF receiver which transfers the originated information to the at least one of the plurality of destination processors;

at least one interface switch, one of the at least one interface switch connecting at least one of the at least one gateway switch to the RF information transmission network and transmitting the originated information received from the gateway switch to the RF information transmission network; and wherein

the originated information is transmitted to the one interface switch by the one gateway switch in response to an address of the one interface switch added to the originated information ~~and the originated information~~ is transmitted from

~~the one interface switch to the RF information transmission~~ network with an address of the at least one of the plurality of destination processors to receive the originated information; and

the electronic mail system transmits originated information from one of the plurality of originating processors in the electronic mail system to at least one of the plurality of destination processors in the electronic mail system through a telephone network.

173. A method for transmitting originated information from one of a plurality of originating processors in an electronic mail system to at least one of a plurality of destination processors in the electronic mail system comprising:

transmitting the originated information originating from the one of the plurality of originating processors to a gateway switch within the electronic mail system;

transmitting the originated information from the gateway switch to an interface switch;

transmitting the originated information received from the gateway switch from the interface switch to an RF information transmission network;

transmitting the originated information with the ~~RF information transmission network to at least one RF~~

receiver which transfers the originated information to the at least one of the plurality of destination processors;

transmitting other originated information with the electronic mail system from one of the plurality of originating processors in the electronic mail system to at least one of the plurality of destination processors in the electronic mail system through a telephone network; and wherein

the originated information is transmitted to the interface switch by the gateway switch in response to an address of the interface switch which has been added to the originated information and the originated information is transmitted from the interface switch to the RF information transmission network with an address of the at least one of the plurality of destination processors to receive the originated information.

174. A system for transmitting originated information from one of a plurality of originating processors in an electronic mail system to at least one of a plurality of destination processors in the electronic mail system comprising:

a RF information transmission network for transmitting the originated information to at least one RF receiver which transfers the originated information to the at least one of the plurality of destination processors;

at least one interface switch, one of the at least one interface switch connecting the electronic mail system to the RF information transmission network and transmitting the originated information received from the electronic mail system to the RF information transmission network; and wherein

the originated information is transmitted to the one interface switch by the electronic mail system in response to an address of the one interface switch added to the originated information and the originated information is transmitted from the one interface switch to the RF information transmission network with an address of the at least one of the plurality of destination processors to receive the originated information; and

the electronic mail system transmits other originated information from one of the plurality of originating processors in the electronic mail system to at least one of the plurality of destination processors in the electronic mail system through a telephone network.

175. A method for transmitting originated information from one of a plurality of originating processors in an electronic mail system to at least one of a plurality of destination processors in the electronic mail system comprising:

transmitting the originated information originating from the one of the plurality of originating processors from the electronic mail system to an interface switch;

transmitting the originated information received from the electronic mail system from the interface switch to an RF information transmission network;

transmitting the originated information with the RF information transmission network to at least one RF receiver which transfers the originated information to the at least one of the plurality of destination processors;

transmitting other originated information with the electronic mail system from one of the plurality of originating processors in the electronic mail system to at least one of the plurality of destination processors in the electronic mail system through a telephone network; and wherein

the originated information is transmitted to the one interface switch by the electronic mail system in response to an address of the interface switch added to the originated information and the originated information is transmitted from the interface switch to the RF information transmission network with an address of the at least one of the plurality of destination processors to receive the originated information.

IN THE ABSTRACT:

Page 84, delete the present Abstract and insert the following new Abstract as follows:

--Electronic Mail System With RF Communications To Mobile Processors and Method of Operation Thereof

Abstract

A system for transmitting originated information from one of a plurality of originating processors in an electronic mail system to at least one of a plurality of destination processors in the electronic mail system in accordance with the invention includes a RF information transmission network for transmitting the originated information to at least one RF receiver which transfers the originated information to the at least one of the plurality of destination processors, at least one interface switch, one of the at least one interface switch connecting the electronic mail system to the RF transmission network and transmitting originated information received from the electronic mail system to the RF information transmission network. The originated information is transmitted to a receiving interface switch by the electronic mail system in response to an address of the receiving interface switch and the originated information is transmitted from the receiving interface switch to the RF information transmission network with an address of the destination processor to receive the information. The electronic mail system transmits other originated information within the electronic mail system through a telephone network.--

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REMARKS

On April 29, 1994, Applicants filed a Supplemental Amendment which cancelled original claims 1-85 and presented new claims 86-171. The April 29th Supplemental Amendment was hand carried to Group 261 to facilitate the Examiner's early consideration thereof. Unfortunately, on May 3, 1994, the Examiner issued an Office Action addressing the patentability of claims 1-85 even though they had been cancelled pursuant to the earlier filed Supplemental Amendment. This Second Supplemental Amendment is submitted for purposes of advancing the prosecution to provide in the record the reasons why the references relied upon by the Examiner in the May 3, 1994 Office Action namely, United States Patent 4,644,351 (Zabarsky et al) and United States Patent 4,875,039 (Andros et al) do not anticipate or render obvious claims 86-175.

Independent claims 86, 103, 120, 137 and 172-175 define a system for transmitting originated information from one of a plurality of originating processors in an electronic mail system to at least one of a plurality of destination processors in the electronic mail system or a method for transmitting originated information from one of a plurality of originating processors in an electronic mail system to at least one of a plurality of destination processors in the electronic mail system. These claims recite that the electronic mail system is connected to a RF information

transmission network for transmitting the originated information to at least one RF receiver which transfers the originated information to the at least one of the plurality of destination processors through an interface switch which connects the electronic mail system to the RF information transmission network and transmits the originated information received from the electronic mail system to the RF information transmission network. Independent claims 86, 103, 172 and 173 are more limited in scope than claims 120, 137, 174 and 175 in that the electronic mail system is recited as having at least one gateway switch or the transmission of the originated information originating from the one of the plurality of originating processors is through a gateway switch which is in the electronic mail system.

The electronic mail system recited in all of the independent claims also transmits other originated information from one of the plurality of originating processors in the electronic mail system to at least one of the plurality of destination processors in the electronic mail system through a telephone network such as that depicted in Fig. 8. The electronic mail system recited in the claims provides telephonic transmission of the other information between one of the plurality of originating processors and at least one of the destination processors. The RF information transmission system recited in the claims provides wireless transmission of the originated information to the at least one RF receiver

which transfers the originated information to the destination processor through an interface switch connecting the electronic mail system and the RF information transmission system.

None of the independent claims can be construed properly to read exclusively upon a wireless system which is, in substance, what the Examiner has done in interpreting Zabarsky et al in the April 29, 1994 Office Action as discussed below.

In the Office Action of May 3, 1994, the Examiner reasoned as follows:

> "...Zabarsky et al disclose an electronic mail system in figure 6 which transmits data messages from an originating processor (paging unit) to a destination processor (paging unit). The system comprises a paging executive (PEX 212) which stores the data messages prior to transmission of the message to the destination processor, and is a gateway switch (when integrated with the data packet switch (214) see col. 5, lines 34-38) which sends messages to remote paging sites (600) and (602). The PEX (212) is also an interface switch which connects the gateway switch to an RF transmission network (NCP and associated base transceivers), which transmits the data message to the destination processor.
>
> Further, when an originating processor resides at paging site (100) and the destination processor resides at a remote paging site (600), the data message is transmitted to the address of a receiving interface switch, i.e. PEX of (600), by the PEX (212). Subsequent to PEX of (600) receiving the data message, the message is sent to the RF transmission network (NCP of 600) with an address of the destination processor which was supplied by the originating processor (see the bridge of cols. 13 and 14).

...as shown in figure 10 of Zabarsky et al., an RF receiver is connectable to the destination processor wherein the message is stored, and further, the processors are capable of receiving and transmitting the data messages.

...Zabarsky et al. teach that the RF receiver of the destination processor each have a unique identification number (address) to receive messages from the RF transmission network. Zabarsky et al. further teach a data packet switch (214) which temporarily stores the received messages and assembles the messages into a packet and transmits the packet to the RF transmission network of a remote paging site.

...Zabarsky et al. further disclose a switch (i.e. data packet switch of 600) which receives and disassembles the packet and sends the messages [to] the RF transmission network for transmission to the destination processors.

...Although Zabarsky et al teaches the transmission of data messages through the PSTN, they fail to teach transmission of messages without the use of the RF information transmission network. However, it is well known in the art to substitute among different communication mediums, (i.e., hardwire, radio, etc.), therefore, it would have been obvious to one of ordinary skill in the art to use solely hard-wire communication between an originating and destination processor as a matter of design choice.

...Although not specifically disclosed by Zabarsky et al., it is fully disclosed by Andros et al. that the address or identification number of a receiving switch is added to the message being transmitted (see fig. 3, lines 66 and 78). Further, since the critical aspect of the invention is the route the data message to the destination processor, claiming the identification code is added at different points of the system lacks criticality. Therefore, it would have been obvious to one of ordinary skill in the art to add the identification code by the various switches lacking any criticality or showing by Applicant."

Applicant comments upon the reasoning of the Examiner as follows for purposes of demonstrating the patentability of claims 86-175.

Zabarsky et al disclose a wireless two-way personal message system with extended coverage which Zabarsky et al recognize is not an electronic mail system. Specifically, column 2, lines 45-54, specifically state in discussing the prior art electronic mail systems:

> "Electronic mail systems provide message services for terminal users who may log on to a time sharing system and request messages which have been stored at the time sharing computer by any site which has a telephone or other means of connecting to the time sharing system. The disadvantage of this system is that there is no indication to the user that a message is being held. The delivery of the message must wait until the user logs on at some location and receives a message held indication from some central site."

It is clear from the foregoing discussion in Zabarsky et al and from their discussion of their invention which is a wireless system that Zabarsky et al themselves do not consider their invention to relate to electronic mail systems as recited in the claims. While some aspects of the wireless Zabarsky et al system do, in fact, utilize the PSTN, Zabarsky et al do not disclose anything which constitutes an electronic mail system and clearly do not transmit originated information from one of a plurality of originating processors in the electronic mail system to at least one of the plurality of destination processors in the electronic mail system through a telephone network as recited in the claims.

Moreover, there is no counterpart of the claimed, gateway switch and interface switch and method of operation thereof which provides a switch coupling between the electronic mail system and the RF information transmission network as recited in the claims. The Examiner has read the claimed interface switch and gateway switch as being within the wireless network of Zabarsky et al. All of the independent claims recite these elements as outside of a wireless system. Claims 86-175 recite clearly that the gateway switch and interface switch or the method of operation connects either the electronic mail system to the RF information transmission network or that the interface switch connects a gateway switch in the electronic mail system to the RF information transmission network. Thus, the claims preclude an interpretation of Zabarsky et al as made by the Examiner in the Office Action that the gateway switch and the interface switch are within the RF information transmission network.

The Examiner specifically recognizes, as quoted above, that Zabarsky et al "fail to teach transmission of messages without the use of the RF transmission network" and nevertheless concludes that "it is well known in the art to substitute among different communication mediums" and that "it would have been obvious to one of ordinary skill in the art to use solely hard-wire communication between an originating and destination processor as a matter of design choice (emphasis added)". The Examiner's reasoning is not

applicable to the claims as described above which define the combination of an electronic mail system and an RF information transmission system which transmits originated information from an originating processor to at least one destination processor using both an electronic mail system including a telephone network and an RF information transmission network which transmits originated information to at least one receiver which transfers the information to at least one destination processor. Thus, it is seen that the Examiner has not provided a teaching in the prior art or reasoning justifying a conclusion of obviousness with regard to the claimed system and method of operation of the electronic mail system and the RF information transmission system which define dual transmission paths of originated information with one of the paths being in the electronic mail system using a telephone network and the other of the paths being from the electronic mail system through an interface switch and through the RF information transmission system to the at least one destination processor.

A person of ordinary skill in the art would interpolate Zabarsky et al as pertaining solely to a wireless system. Why else is the system disclosed as having RF transceivers which are only useful when wireless and portable. The assumption without citation of prior art or reasoning that Zabarsky et al's transceivers would be made "solely hard-wire communication" is incorrect and, even if Zabarsky et al was so

modified, would not meet the claims because of the recited dual communication paths involving telephonic and wireless communications which use the claimed interface switch between the electronic mail system and the RF information transmission system. There is no basis in the record why a person of ordinary skill in the art would be led to modify the teachings of Zabarsky et al to arrive at the claimed combination.

The citation of Andros et al is noted. However, Andros et al do not pertain to an electronic mail system. There is no basis why a person of ordinary skill in the art would be led to combine the teachings of Andros et al with an electronic mail system as recited in the claims. The Examiner's reasoning is based upon impermissible hindsight without the citation of any prior art suggesting the combination.

Newly submitted claims 172-175 define the invention more broadly than independent claims 86, 103, 120 and 137 by not specifically reciting where the address of the one interface switch is added and the address of the at least one of the plurality of destination processors is added to the originated information. However, as stated above, Zabarsky et al and Andros et al do not teach the basic system or method of operation of an electronic mail system having a plurality of originating and destination processors, an RF information transmission system, a gateway switch and an interface switch as defined in differing degrees of breadth by the claims.

Therefore, newly submitted claims 172-175 are patentable for the same reasons set forth above with regard to claims 86-171.

The dependent claims further define aspects of the claimed invention which are not anticipated or rendered obvious by Zabarsky et al and Andros et al. Applicants point out that numerous additional unobvious differences exist between the prior art and the dependent claims which they believe do not warrant discussion and wish the record to reflect that patentability of the dependent claims does not stand or fall with the independent claims.

A check in the amount of $148.00 is submitted herewith to cover the cost of newly submitted claims 172-175.

Early allowance of the claims is respectfully requested.

Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (780.29643X00), and please credit any excess fees to such deposit account.

Respectfully submitted,

HENDERSON & STURM

William H. Wright
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WHW:dlh